## <u>REMARKS</u>

This is in response to the Notice of Allowance and Examiner's Amendment mailed January 28, 2003. Claim 31 has been amended herein to correct a typographical error in the Examiner's Amendment, and new claims 38-60 have been added. Thus, claims 29-36 (already allowed) and 38-60 are now pending. It is noted that claim 7 was canceled in the Examiner's Amendment. Attached hereto is a marked-up version of the changes made to the claim(s) by the current amendment. The attached page(s) is captioned "Version With Markings To Show Changes Made."

In the Examiner's Amendment accompanying the Notice of Allowance, the Examiner with respect to claim 31 mis-typed the last line of the claim. In particular, claim 31 requires  $d1 > 2 \times d2$  (not  $d1 = 2 \times d2$  as in the Examiner's Amendment). The instant Amendment corrects this typographical error in claim 31.

Example support for new claim 58 may be found, for example and without limitation, in Fig. 2 of the parent Patent No. 6,195,140.

Example support for new claim 59 may be found, for example and without limitation, in Fig. 21 of the parent Patent No. 6,295,109.

Example support for new claim 60 may be found, for example and without limitation, in Figs. 1 and 3 of the parent Patent No. 6,195,140.

Applicant notes that parents 6,195,140 and 6,295,109 are incorporated in the instant application by reference.

Finally, with respect to the reasons for allowance dated January 28, 2003, applicant notes that claims 30-31 do not recite that "electrooptical characteristics of the

reflection area and the transmission area are approximately matched" and claim 32 does not require that the transmissive and reflective electrodes are "formed as independent to each other."

If any questions should arise, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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## VERSION WITH MARKINGS TO SHOW CHANGES MADE

## IN THE CLAIMS

- 31. (Amended) A liquid crystal display device comprising:
- a first substrate and a second substrate;
- a liquid crystal layer interposed between the first substrate and the second substrate;
- a first polarizer provided on a surface of the first substrate which is opposite the liquid crystal layer;
- a second polarizer provided on a surface of the second substrate which is opposite the liquid crystal layer;
- a first phase compensation element provided between the first polarizer and the liquid crystal layer; and
- a second phase compensation element provided between the second polarizer and the liquid crystal layer,

wherein a plurality of pixel areas are provided for display, each of the plurality of pixel areas comprises a reflection area for performing display using reflected light and a transmission area for performing display using transmitted light, wherein a reflective electrode region defining the reflection area and a transmissive electrode region defining the transmission area are formed in correspondence with each pixel area on the second substrate,

wherein a thickness (dl) of the liquid crystal layer in the transmissive electrode region and a thickness (d2) of the liquid crystal layer in the reflective electrode region are defined by a relationship [d1 > d2, and wherein the relationship is  $]d1 > 2 \times d2$ .

Please add the following new claims:

38. (New) A liquid crystal display device comprising:

- a first substrate and a second substrate;
- a liquid crystal layer interposed between at least the first substrate and the second substrate;
  - a first polarizer supported by the first substrate;
  - a second polarizer supported by the second substrate;

wherein a plurality of pixel areas are provided for display, at least one of the pixel areas comprising a liquid crystal region including a reflection area for performing display using reflected light and a transmission area for performing display using transmitted light, wherein a reflective electrode is provided in at least the reflection area and a transmissive electrode is provided in at least the transmission area, said reflective and transmissive electrodes each being supported by the second substrate; and

wherein a thickness (dl) of the liquid crystal layer in the transmissive area and a thickness (d2) of the liquid crystal layer in the reflection area are defined by a relationship d1 > d2, and wherein thickness d1 is substantially larger than thickness d2.

- 39. (New) The liquid crystal display device of claim 38, wherein the reflective electrode is located over top of the transmissive electrode.
  - 40. (New) The liquid crystal display device of claim 38, wherein  $d\hat{1} \ge d\hat{2}$ .
- 41. (New) The liquid crystal display device of claim 38, wherein at least part of the reflective electrode overlaps part of the transmissive electrode.
- 42. (New) The liquid crystal display device of claim 38, further comprising an optical compensating film located on each side of the liquid crystal layer.
  - 43. (New) The liquid crystal display device of claim 38, wherein  $d1 \ge d2 \times 2$ .
- 44. (New) The liquid crystal display device of claim 38, wherein at least parts of both the reflective and transmissive electrodes are located in the reflection area.
- 45. (New) The liqud crystal display device of claim 44, wherein the transmission area comprises the transmissive electrode but not the reflective electrode.
- 46. (New) The liquid crystal display device of claim 38, wherein the reflective and transmissive electrodes are both supported by the second substrate, wherein color filters of the display are supported by the first substrate and are thus across the liquid crystal layer from the transmissive and reflective electrodes.
  - 47. (New) A liquid crystal display device comprising:
  - a first substrate and a second substrate;

a liquid crystal layer interposed between at least the first substrate and the second substrate:

wherein a plurality of pixel areas are provided for display, at least one of the pixel areas comprising a liquid crystal region including a reflection area for performing display using reflected light and a transmission area for performing display using transmitted light, wherein a reflective electrode is provided in at least the reflection area and a transmissive electrode is provided in at least the transmission area, said reflective and transmissive electrodes each being supported by the second substrate; and

wherein a thickness (dl) of the liquid crystal layer in the transmissive area and a thickness (d2) of the liquid crystal layer in the reflection area are defined by a relationship  $d1 \ge d2 \times 2$ .

- 48. (New) The liquid crystal display device of claim 47, wherein the reflective electrode is located over top of the transmissive electrode.
- 49. (New) The liquid crystal display device of claim 47, wherein at least part of the reflective electrode overlaps part of the transmissive electrode.
- 50. (New) The liquid crystal display device of claim 47, further comprising an optical compensating film located on each side of the liquid crystal layer.
- 51. (New) The liquid crystal display device of claim 47, wherein at least parts of both the reflective and transmissive electrodes are located in the reflection area.

- 52. (New) The liqud crystal display device of claim 51, wherein the transmission area comprises the transmissive electrode but not the reflective electrode.
  - 53. (New) A liquid crystal display device comprising:
  - a first substrate and a second substrate;
- a liquid crystal layer interposed between at least the first substrate and the second substrate;

wherein at least one pixel area comprises a liquid crystal region including a reflection area for performing display using reflected light and a transmission area for performing display using transmitted light, wherein a reflective electrode is provided in at least the reflection area and a transmissive electrode is provided in at least the transmission area, said reflective and transmissive electrodes each being supported by the second substrate;

wherein a thickness (dl) of the liquid crystal layer in the transmissive area and a thickness (d2) of the liquid crystal layer in the reflection area are defined by a relationship d1 > d2, and wherein thickness d1 is substantially larger than thickness d2, and wherein the reflective electrode at least partially overlaps the transmissive electrode.

- 54. (New) A transflective liquid crystal display device comprising:
- a first substrate and a second substrate:
- a liquid crystal layer interposed between the first substrate and the second substrate; and

a plurality of pixel areas provided for display, at least one of the pixel areas including a reflection area for performing display using reflective light and a transmission area for performing display using transmitted light;

wherein a first conductive layer having a high property of light transmission efficiency provided in at least the transmission area and a second conductive layer having a high property of light reflection efficiency provided in at least the reflection area are formed in the at least one pixel area, and the first conductive layer and the second conductive layer are formed as independent layers to each other, and an insulation layer is provided between the first conductive layer and the second conductive layer; and

wherein the insulation layer comprises an organic resin, and a surface of the insulation layer on which the second conductive layer is formed comprises a wave-like surface shape, and the surface of the second conductive layer comprises a wave-like surface shape.

- 55. (New) A liquid crystal display comprising:
- a first substrate;
- a second substrate;
- a liquid crystal layer located between at least the first and second substrates;
- a first polarizer supported by a surface of the first substrate opposite the liquid crystal layer;
- a second polarizer supported by a surface of the second substrate opposite the liquid crystal layer;

a first phase compensation element provided between the first polarizer and the liquid crystal layer;

a second phase compensation element provided between the second polarizer and the liquid crystal layer;

a plurality of pixels provided for display;

wherein the first substrate includes at least one transmissive electrode, and the second substrate includes a reflective electrode region and a transmissive electrode region in correspondence with each of the plurality of pixel areas;

wherein each of the plurality of pixel areas comprises a reflective region for performing display using reflective light and a transmissive region for performing display using transmitted light, and wherein the reflective electrode region is provided in at least the reflective region, and the transmissive electrode region is provided in at least the transmissive region; and

wherein the liquid crystal layer has a retardation of  $\alpha$  when a molecular axis of liquid crystal molecules in the liquid crystal layer is almost vertical with respect to the surface of the first and second substrates, and the first phase compensation element has a retardation which fulfills  $\lambda/4-\alpha$  condition.

- 56. (New) A liquid crystal display comprising:
- a first substrate;
- a second substrate;
- a liquid crystal layer located between at least the first and second substrates;

a first polarizer supported by a surface of the first substrate opposite the liquid crystal layer;

a second polarizer supported by a surface of the second substrate opposite the liquid crystal layer;

a first phase compensation element provided between the first polarizer and the liquid crystal layer;

a second phase compensation element provided between the second polarizer and the liquid crystal layer;

a plurality of pixels provided for display;

wherein the first substrate includes at least one transmissive electrode, and the second substrate includes a reflective electrode region and a transmissive electrode region in correspondence with each of a plurality of pixel areas;

wherein each of the plurality of pixel areas comprises a reflective region for performing display using reflective light and a transmissive region for performing display using transmitted light, and wherein the reflective electrode region is provided in at least the reflective region, and the transmissive electrode region is provided in at least the transmissive region; and

wherein the second phase compensation element is formed of a  $\lambda/4$  wave plate, and a slower optic axis of the second phase compensation element matches one of a longer axis or a shorter axis of elliptically polarized light transmitted through the liquid crystal layer and incident on the second phase compensation element so as to convert the

elliptically polarized light into linearly polarized light, and a transmission axis of the second polarizer is perpendicular to a polarizing axis of the linearly polarized light.

57. (New) A liquid crystal display device comprising a first substrate, a second substrate, and a liquid crystal layer provided between at least the first and second substrates, a plurality of pixel regions comprising respective electrodes for applying voltage to the liquid crystal layer,

wherein each of a plurality of the pixel regions includes a reflection region and a transmission region, and wherein light reflected in said reflection regions and light transmitted through said transmission regions are utilized in displaying an image;

wherein the first substrate includes a reflection electrode region provided in at least the reflection region of a pixel region and a transmission electrode region provided in at least the transmission region of the pixel region; and

wherein the reflection electrode region is higher than the transmission electrode region, forming a step on a surface of the first substrate, and thus a thickness of the liquid crystal layer in the reflection region is smaller than a thickness of the liquid crystal layer in the transmission region.

58. (New) A liquid crystal display device comprising:

a first substrate, a second substrate, and a liquid crystal layer located between the first substrate and the second substrate, a plurality of pixel regions being defined by respective electrodes for applying a voltage to the liquid crystal layer,

wherein each of the plurality of pixel regions includes a reflection region and a transmission region for displaying images;

wherein, on one of the substrates the transmission region is provided so as to include a transmission electrode and a reflective region is provided so as to include a reflective means; and

wherein the reflective means is provided in contact with the liquid crystal layer side of the transmission electrode.

59. (New) A liquid crystal display device comprising:

a first substrate, a second substrate, and a liquid crystal layer located between the first substrate and the second substrate, a plurality of pixel regions being defined by respective electrodes for applying a voltage to the liquid crystal layer,

wherein each of the plurality of pixel regions includes a reflection region and a transmission region for displaying images;

wherein, on one of the substrates the transmission region is provided so as to include a transmission electrode and a reflective region is provided so as to include a reflective means; and

wherein for each of a plurality of the pixel regions, the reflective means is provided at the periphery of the pixel region.

60. (New) A liquid crystal display device comprising:

a first substrate, a second substrate, and a liquid crystal layer located between the first substrate and the second substrate, a plurality of pixel regions being defined by respective electrodes for applying a voltage to the liquid crystal layer,

wherein each of the plurality of pixel regions includes a reflection region and a transmission region for displaying images;

wherein, on one of the substrates the transmission region is provided so as to include a transmission electrode and a reflective region is provided so as to include a reflective means; and

wherein for each of the plurality of pixel regions, two transmission regions are provided in a single pixel region.